

REMARKS

Claims 1-23 are pending in the subject application. Claims 1-2, 7-11, 13-15 and 20-23 are amended and claims 3-6, 12, and 16-19 are canceled without prejudice. Applicants submit that the amendments herein introduce no new matter, support therefore being found throughout the application as originally filed (e.g. see U.S. Application Publication No. 2004/0135881 at [0014], [0016], [0048], [0056]-[0058]). Reconsideration of the previous rejections in light of the remarks that follow is respectfully requested.

1. 35 U.S.C. §102 Rejections

Claims 1-4 and 11 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,369,317 to Shurcliff (hereinafter “Shurcliff”). Applicants respectfully traverse. However, in the interest of expediting prosecution, and in no way acquiescing to the validity of the Examiner’s rejection, Applicants have amended the claims.

Applicants recite, in claim 1, a method for detecting an object from its background or surroundings. As set out, an area is viewed with a viewing device comprising a first filter and a second filter. While viewing the area, the sensitivity of the viewing device to certain wavelengths of light lying in the UV range is changed using the first filter and, further, the sensitivity of the viewing device to certain wavelengths of light lying in the IR range is changed using the second filter, such that the first filter passes visible light plus a variable bandpass of UV light while the second filter passes visible light plus a variable bandpass of IR light. The presence of an object is then determined when a difference in color or tonality between the object and background is discerned when the sensitivity of the viewing device is changed to pass a certain mixture of input of UV, IR and visible light.

Applicants further recite, in independent claim 11, an apparatus for detecting an object from its background or surroundings. The apparatus comprises an electro-optical viewing device capable of detecting light in one of the ultraviolet (UV) range, the visible range, the near infrared or the far infrared, and a mechanism disposed between the object and the electro-optical viewing device. As set out, the mechanism comprises a first filter and a second filter wherein the first filter comprises at least a portion of the ultraviolet (UV) range divided into a plurality of

viewing bandpasses and the second filter comprises at least a portion of the infrared (IR) range divided into a plurality of viewing bandpasses. As set out, the first filter is configured to pass visible light plus a variable bandpass of UV light and the second filter is configured to pass visible light plus a variable bandpass of IR light. Further, the mechanism is configured and arranged to selectively and varyingly change the bandpass of UV light and the bandpass of IR light. As set out, as the bandpass of UV light and bandpass of IR light to the device are varied, the device provides a visual difference between the color or tonality of the object and the background.

Shurcliff, on the other hand, provides for spectrally rearranged reproduction methods. According to Shurcliff, three sharp cutting filters which pass narrow bands in the visible range (540 nm, 650 nm, and 690 nm) are used such that objects that show strong reflectance at 540 nm appear red, those at 650 appear blue, and those at 690 appear yellow. According to Shurcliff, this makes it possible to distinguish between shades of green.

The Office points to col. 2, lines 22-44 of Shurcliff and asserts that Shurcliff describes changing the sensitivity of a viewing device to a mixture of wavelengths in the UV and/or IR range. This portion of Shurcliff sets out that spectral rearrangement in the UV range can be provided by use of the three filters (i.e. the sharp cutting filters which pass narrow bands at 540 nm, 650 nm, and 690 nm) backed with fluorescent samples that fluoresce with the required different visual colors. In other words, the same filters with bands in the visible range are used together with samples that emit light of a visible color when they are stimulated or excited by light or other forms of electromagnetic radiation.

Applicants respectfully submit that Shurcliff clearly does not teach or suggest a method or apparatus wherein a first filter comprising at least a portion of the UV range is divided into a plurality of bandpasses and a second filter comprising at least a portion of the IR range is divided into a plurality of bandpasses, and wherein the first and second filter are configured such that the first filter passes visible light plus a variable bandpass of UV light while the second filter passes visible light plus a variable bandpass of IR light, wherein a difference in color or tonality

between the object and background is discerned when the sensitivity of the viewing device is changed to pass a certain mixture of input of UV, IR and visible light.

Thus, claims 1 and 11 are patentable over Shurcliff. Claims 2, 7-10, 13-15, and 20-23 depend from claims 1 and 11 and, thus, also are patentable over Shurcliff. Reconsideration and withdrawal of the rejection is respectfully requested.

2. 35 U.S.C. §103 Rejections

Shurcliff and Miller

Claims 5-10, 12-14, and 18-23 are rejected under 35 U.S.C. §103(a) over Shurcliff and U.S. Patent No. 5,940,183 to Miller (hereinafter “Miller”). Applicants respectfully traverse.

As set out above, Shurcliff at least does not teach or suggest Applicants’ method or apparatus wherein a first filter comprising at least a portion of the UV range is divided into a plurality of bandpasses and a second filter comprising at least a portion of the IR range is divided into a plurality of bandpasses, and wherein the first and second filter are configured such that the first filter passes visible light plus a variable bandpass of UV light while the second filter passes visible light plus a variable bandpass of IR light, wherein a difference in color or tonality between the object and background is discerned when the sensitivity of the viewing device is changed to pass a certain mixture of input of UV, IR and visible light.

Miller describes a reflectometer that is used in the clinical field for diagnostic testing of test elements/assays. In accordance with Miller’s design, a plurality of filters having unique thicknesses and bandpasses are provided such that “only one or another or the plural filters thereon (e.g., filter number 1, 2,...8) is selected at any one time to intercept beam 118” (see col. 4, lines 58-61).

Clearly Miller does not remedy the above-noted deficiencies in Shurcliff. Like Shurcliff, Miller at least does not teach or suggest method or apparatus wherein a first filter comprising at least a portion of the UV range is divided into a plurality of bandpasses and a second filter comprising at least a portion of the IR range is divided into a plurality of bandpasses, and

wherein the first and second filter are configured such that the first filter passes visible light plus a variable bandpass of UV light while the second filter passes visible light plus a variable bandpass of IR light, wherein a difference in color or tonality between the object and background is discerned when the sensitivity of the viewing device is changed to pass a certain mixture of input of UV, IR and visible light.

Thus, it is respectfully submitted that even if Miller and Shurcliff were combined, Applicants' methods and apparatus still would not be taught or suggested. As such, claims 1 and 11 are patentable over Shurcliff and Miller. Claims 2, 7-10, 13-15, and 20-23 depend from claims 1 and 11 and, thus, also are patentable over Shurcliff and Miller. Reconsideration and withdrawal of the rejection is respectfully requested.

Shurcliff, Miller, and Korniski

Claim 15 is rejected under 35 U.S.C. §103(a) over Shurcliff, Miller, and U.S. Patent No. 6,646,799 to Korniski et al ("Korniski"). Applicants respectfully traverse.

Kornisiki is cited as allegedly describing a system wherein multiple energy bands are combined to improve scene viewing wherein multiple viewing bandpasses are successively and separately added into the image forming sensitivity of a color viewing device. As provided by Kornisiki, multiple bands of incoming radiation including visible, VIS/NIR (visible/near-wavelength infrared), MWIR (mid-wavelength IR), and LWIR (long-wavelength IR) (see, e.g. col. 2, lines 43-46).

However, like Shurcliff and Miller, Kornisiki at least does not teach or suggest method or apparatus wherein a first filter comprising at least a portion of the UV range is divided into a plurality of bandpasses and a second filter comprising at least a portion of the IR range is divided into a plurality of bandpasses, and wherein the first and second filter are configured such that the first filter passes visible light plus a variable bandpass of UV light while the second filter passes visible light plus a variable bandpass of IR light, wherein a difference in color or tonality between the object and background is discerned when the sensitivity of the viewing device is changed to pass a certain mixture of input of UV plus visible and IR plus visible light.

Thus, it is respectfully submitted that even if Mille, Shurcliff and Korniski were combined, Applicants' methods and apparatus still would not be taught or suggested. As such, claim 1 is patentable over Shurcliff, Miller and Korniski. Claim 15 depends from claim 1 and, thus, also is patentable over Shurcliff, Miller and Korniski. Reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested. If for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. **04-1105**, under Order No. 58096(71106).

Respectfully submitted,

Dated: July 16, 2010

By: /Lisa Swiszc Hazzard/
Lisa Swiszc Hazzard
Registration No.: 44,368
EDWARDS ANGELL PALMER & DODGE
LLP
P.O. Box 55874
Boston, Massachusetts 02205
(617) 517-5512
Attorneys/Agents For Applicant